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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,204	09/26/2003	Yigal Bejerano	Y. BEJERANO 2-48	8936
47394	7590	01/10/2008	EXAMINER	
HITT GAINES, PC			GUYTON, PHILIP A	
ALCATEL-LUCENT				
PO BOX 832570			ART UNIT	
RICHARDSON, TX 75083			PAPER NUMBER	
			2113	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket@hittgaines.com

mn

<b>Office Action Summary</b>	<b>Application No.</b> 10/672,204	<b>Applicant(s)</b> BEJERANO ET AL.	
	<b>Examiner</b> Philip Guyton	<b>Art Unit</b> 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-6,8,10-13 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8,10-13 and 15-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-6, 8, 10-13, and 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by "Optimizing probe selection for fault localization" by Brodie et al. (hereinafter Brodie).

With respect to claim 1, Brodie discloses a system for monitoring link delays and faults in an IP network (abstract – "*We investigate...find a nearly-optimal set*"), comprising:

a monitoring station identifier that computes a set of monitoring stations that covers links in at least a portion of said network (1. Introduction, paragraph 3 – "*To use probes, probing stations must first be selected at one or more locations in the network*"), wherein said set of monitoring stations is selected as a minimal set (4.2 Results, paragraph 3 – "*Although it is sufficient...size of the probe set*" and figure 10); and

a probe message identifier, coupled to said monitoring station identifier, that computes a set of probe messages to be transmitted by at least ones of said set of monitoring stations such that said delays and faults in specific links spanning said set of

monitoring stations can be determined (1. Introduction, paragraph 4 – *“As a first step towards this goal...problems anywhere in the network”*).

With respect to claim 3, Brodie discloses wherein said set of probe messages is a minimal set (2.1 Problem Formulation, paragraph 1 – *“Finding the minimal set of probes...is the number of probes”*).

With respect to claim 4, Brodie discloses wherein said set of monitoring stations covers links in an entirety of said network (3.1 Determining the Initial Probe Set, paragraph 3 – *“A probe can be sent...and send a probe to every node”*).

With respect to claim 5, Brodie discloses wherein said probe messages have a selected one of:

identical message costs, and

message costs that are based on a number of hops to be made by said probe messages (3.1 Determining the Initial Probe Set, paragraph 3 – *“A probe can be sent to any...least-cost) path through the network”*).

With respect to claim 6, Brodie discloses wherein said probe message identifier, coupled to said monitoring station identifier, that employs polynomial-time approximation (2.1 Problem formulation, paragraph 1 and 5. Related work, paragraph 3) to compute a set of probe messages to be transmitted by at least ones of said set of monitoring stations such that said delays and faults in specific links spanning said set of monitoring stations can be determined (1. Introduction, paragraph 4 – *“As a first step towards this goal...problems anywhere in the network”*).

Claims 8, and 10-13 are a method as performed by the system of claims 1, and 3-6, and are rejected under the same rationale.

With respect to claim 15, Brodie discloses a system for monitoring link delays and faults in an IP network (abstract – *“We investigate...find a nearly-optimal set”*), comprising:

a monitoring station identifier that employs polynomial-time approximation algorithms (2.1 Problem formulation, paragraph 1, 4.2 Results, (i) Probe Set Size, (ii) Number of Probe Stations, and 5. Related work, paragraph 3) to compute a selected minimal set of monitoring stations that covers links in at least a portion of said network (1. Introduction, paragraph 3 – *“To use probes, probing stations must first be selected at one or more locations in the network”*); and

a probe message identifier, coupled to said monitoring station identifier, that employs polynomial-time approximation (2.1 Problem formulation, paragraph 1 and 5. Related work, paragraph 3) to compute a set of probe messages to be transmitted by at least ones of said set of monitoring stations such that said delays and faults in specific links spanning said set of monitoring stations can be determined (1. Introduction, paragraph 4 – *“As a first step towards this goal...problems anywhere in the network”*).

With respect to claim 16, Brodie discloses wherein said set of monitoring stations covers links in an entirety of said network (3.1 Determining the Initial Probe Set, paragraph 3 – *“A probe can be sent...and send a probe to every node”*).

With respect to claim 17, Brodie discloses wherein said probe messages have a selected one of:

identical message costs, and  
message costs that are based on a number of hops to be made by said probe messages (3.1 Determining the Initial Probe Set, paragraph 3 – *“A probe can be sent to any...least-cost) path through the network”*).

With respect to claim 18, Brodie discloses wherein said minimal set of monitoring stations guarantees delay and fault monitoring of all active links in a presence of at most K-1 failures (3.2 Determining the Diagnostic Power of a Set of Probes, paragraphs 2-3 – *“Since each column is unique...number of probes needed”*).

With respect to claim 19, Brodie discloses wherein said minimal set of monitoring stations always covers said links in said at least said portion of said network (3.1 Determining the Initial Probe Set, paragraph 3 – *“A probe can be sent...a probe to every node*).

With respect to claim 20, Brodie discloses a system for monitoring link delays and faults in an IP network (abstract – *“We investigate...find a nearly-optimal set”*), comprising:

a monitoring station identifier that computes a set of monitoring stations that covers links in at least a portion of said network (1. Introduction, paragraph 3 – *“To use probes, probing stations must first be selected at one or more locations in the network”*), wherein said set of monitoring stations is selected as a minimal set (4.2 Results, paragraph 3 – *“Although it is sufficient...size of the probe set”* and figure 10); and

a probe message identifier, coupled to said monitoring station identifier, that computes a set of probe messages to be transmitted by at least ones of said set of

monitoring stations such that said delays and faults in specific links spanning said set of monitoring stations can be determined (1. Introduction, paragraph 4 – *“As a first step towards this goal...problems anywhere in the network”*),

wherein said minimal set of stations satisfies at least two constraints:

a covering set constraint (3.1 Determining the Initial Probe set, paragraph 3 – *“This creates a candidate set of...a probe to every node”* and 4.2 Results, paragraph 3 – *“Although it is sufficient...minimal probe set size decreases”*); and

a covering assignment constraint (3.1 Determining the Initial Probe set, paragraph 3 – *“A probe can be sent to...a probe to every node”* and figure 3).

With respect to claim 21, Brodie discloses wherein said minimal set of monitoring stations is an optimal set of monitoring stations (4.2 Results, paragraph 3 – *“Although it is sufficient...size of the probe set”* and figure 10).

Claim 22 is a method as performed by the system of claim 20, and is rejected under the same rationale.

### ***Response to Arguments***

3. Applicant's arguments filed 29 October 2007 have been fully considered but they are not persuasive. Applicant argues that Brodie does not disclose wherein said set of monitoring stations is selected as a minimal set, as recited in the amended claims. The examiner respectfully disagrees. Brodie teaches placing probe stations so as to create a balance in costs between probe stations and probes (1. Introduction, paragraph 3 – *“To use probes, probing stations...for probing practitioners”*). However, Brodie also

clearly teaches wherein a single probe station can be selected (3.1 Determining the Initial Probe set, paragraph 3 – *“This creates a candidate set of...a probe to every node”* and 4.2 Results, paragraph 3 – *“Although it is sufficient...minimal probe set size decreases”*). Thus, this must be the minimal set of probe stations. Therefore, Brodie clearly teaches wherein the set of monitoring stations is selected as a minimal set.

In addition, as a result of further consideration, the examiner has determined that Brodie does teach the limitations of claim 20 (see citations in rejection above).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Guyton whose telephone number is (571) 272-3807. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.




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12/26/07

  
ROBERT BEAUSOLIEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100